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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,144

12/20/2005

Yossef Gohary

0-05-108

4928

7590 06/13/2007
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EXAMINER

HEINCER, LIAM J

ART UNIT

PAPER NUMBER

1709

MAIL DATE

DELIVERY MODE

06/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,144

Applicant(s)

GOHARY ET AL.

Examiner

Liam J. Heincer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☒ Claim(s) 1-13 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05-2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-12, drawn to an improved WPC.

Group II, claim(s) 13, drawn to a method for producing an improved WPC.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special inventive feature of group I is a biocide comprising TBBA and its derivatives. This technical feature is not present in group II.

During a telephone conversation with applicant's attorney Kevin McCarthy on May 21, 2007 a provisional election was made with traverse to prosecute the invention of group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claim 13 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is

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required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Considering Claim 4: Claim 4 is a repetition of the limitation of claim 1 regarding the composition of the active ingredient, TBBA.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 10 recites the broad recitation alcohol, and the claim also recites ethanol, which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7, 11 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders, JR. et al (US 2004/0076847) in view of Hepp (US Pat. 4,629,750). Considering Claims 1-4: Saunders, JR. et al. teaches a wood polymer composite produced from mixture (¶0022) comprising wood particles (¶0012); and a thermoplastic/plastic (¶0021); further comprising an active ingredient that acts as a biocide (¶0020) wherein the active ingredient is added to the wood particles before production of the composite (¶0019).

Saunders, JR. et al. does not teach the use of TBBA in the composite. However, Hepp teaches the use of a TBBA derivative in a wood filled polymer composition (3:2-6). Saunders, JR. et al. and Hepp are combinable as they are concerned with the same field of endeavor, filled polymer compositions. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have combined Hepp with

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the composite of Saunders, JR. et al., and they would have been motivated to do so as Hepp suggests that the TBBA derivative also acts as a flame retardant (3:2-6).

Claims 2 and 3 are product by process claims and the process steps recited in these claims do not appear to materially affect the composite structure in a different manner than that taught by the applied references. See MPEP 2113.

Considering Claim 5: Saunders, JR. et al. teaches dry blending of the composite (¶0033).

Considering Claims 6 and 7: Saunders, JR. et al. teaches the biocide/active ingredient being in an aqueous solution (¶0012 and 0014).

Considering Claims 11: Saunders, JR. et al. teaches the biocide being present in a concentration of 0.5 to 20 weight percent of the composite (¶0022, 0020, and 0028).

Considering Claims 12: Saunders, JR. et al. does not teach the biocide being present in a concentration of 1 to 2.5 weight percent of the composite. However, Hepp teaches a TBBA derivative as being present in a concentration of 1 to 2.5 weight percent of the composite (2:34-47). At the time of the invention a person having ordinary skill in the art would have found it obvious to use the amount of active ingredient in Hepp in the composite of Saunders, JR. et al., and they would have been motivated to do so as Hepp suggests a concentration in this range will be sufficient to reduce the flammability of the resin (2:34-47).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders, JR. et al (US 2004/0076847) in view of Hepp (US Pat. 4,629,750) as applied to claim 7 above, and further in view of Brackenridge (US Pat. 4,013,728) and Fushihara et al. (US Pat. 6,383,127).

Considering Claim 8: Saunders, JR. et al. teaches the basic composite as in claim 7. In addition, Saunders, JR. et al. teaches the solvent comprising water (¶0019).

Saunders, JR. et al. does not teach the aqueous solvent comprising sodium hydroxide. However, Brackenridge teaches the use of sodium hydroxide in an aqueous solution of tetrabromobisphenol A. Saunders, JR. et al. and Brackenridge are combinable as they are concerned with a similar technical difficulty, aqueous solutions

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of a biocide. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used the sodium hydroxide of Brackenridge in the solution of Saunders, JR. et al., and they would have been motivated to do so as Brackenridge teaches that sodium hydroxide will neutralize any HBr present in the solution (1:62-2:3).

Saunders, JR. et al. does not teach the aqueous solvent comprising sodium dithionite. However, Fushihara et al. teaches the use of sodium dithionite in an aqueous solution of tetrabromobisphenol A. Saunders, JR. et al. and Fushihara et al. are combineable as they are concerned with a similar technical difficulty, aqueous solutions of a biocide. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have used the sodium dithionite of Fushihara et al. in the solution of Saunders, JR. et al., and they would have been motivated to do so as Fushihara et al. teaches that sodium dithionite will reduce any bromine present in the solution (10:37-55).

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders, JR. et al (US 2004/0076847) in view of Hepp (US Pat. 4,629,750) as applied to claim 6 above, and further in view of Autant et al. (US Pat. 5,441,742).

Considering Claims 9 and 10: Saunders teaches the basic composite of claim 6 as stated above.

Saunders, JR. et al. does not teach the active ingredient being dissolved in an organic solvent. However, Autant et al. teaches dissolving a biocide/the active ingredient (1:14-17) that is to be used to treat cellulosic material in a hydrocarbon matrix/solvent (4:65-66). Saunders, JR. et al. and Autant are combinable as they are concerned with a similar technical difficulty, introduction of a biocide to a cellulosic composite. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have combined the matrix of Autant with the composite of Saunders, JR. et al., and they would have been motivated to do so as Autant teaches that the organic matrix allows for the active ingredient's release to be controlled (1:19-25).

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO form 892.

Lindemann et al (US Pat 5,177,128) teaches spraying the biocide (9:12-20) onto a cellulose material (9:20-25) to ensure even distribution of the active agent (14:10-13).

Correspondence

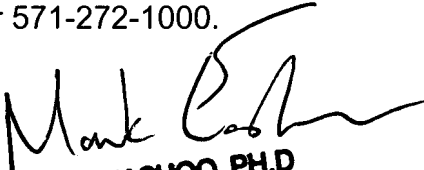
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LJH

LH


MARK EASHOO, PH.D
PRIMARY EXAMINER
11/Jun/07

June 11, 2007